

# BRAC

Review of Potential Policy Options

July 31, 2007

Glade Sowards

# Two potential policy options for Transportation/Land Use sector:

- Congestion pricing/zones
- Incentives to remove old cars from roads

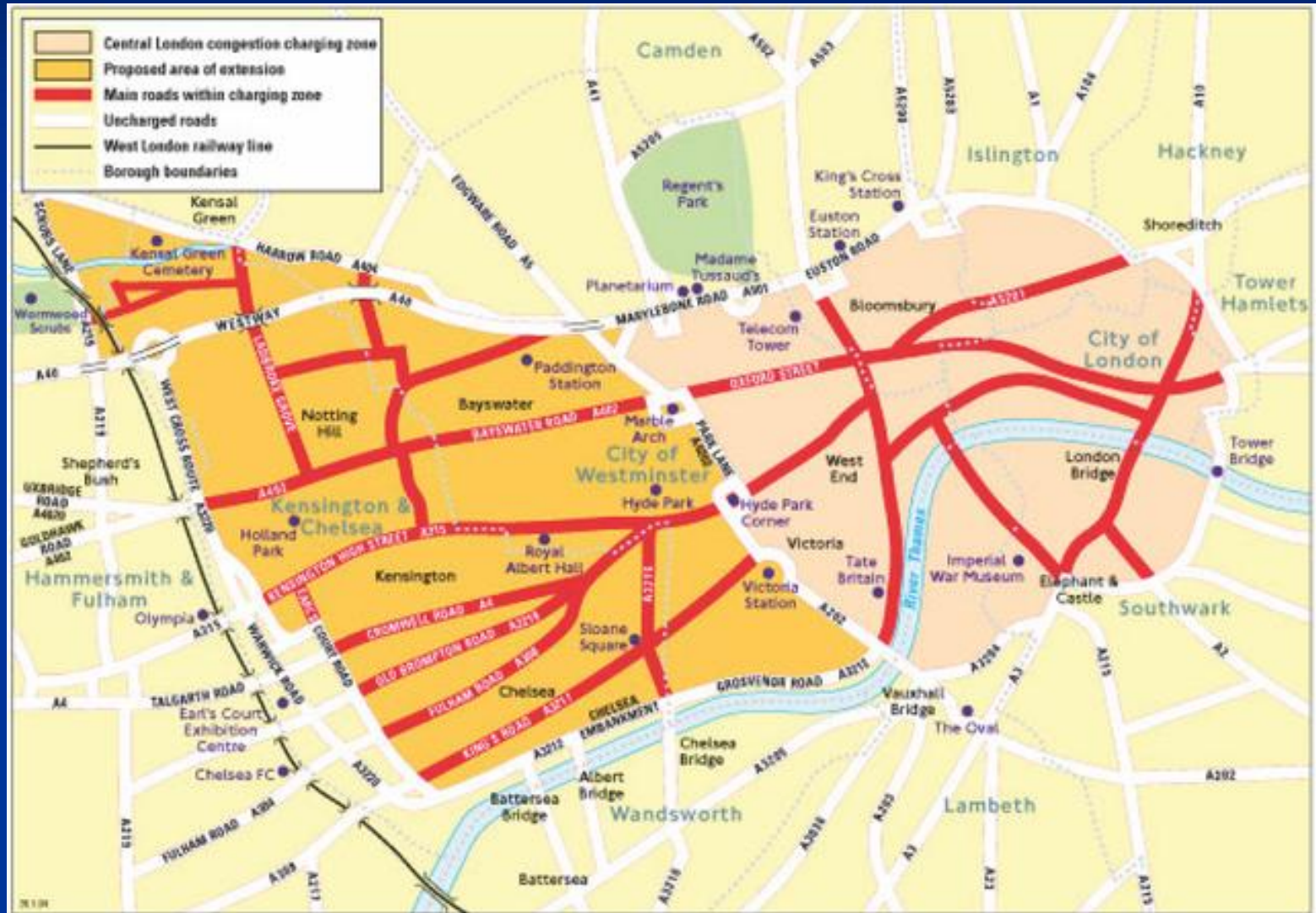
# Congestion pricing/zones

- Charges fee(s) to discourage use of vehicles in high-congestion urban areas
- Goals:
  - Congestion mitigation
  - Reducing air pollution (e.g. PM, NO<sub>x</sub>, CO, etc.)
  - Reducing GHG emissions (primarily CO<sub>2</sub>)
  - Examples:
    - Singapore
    - Stockholm
    - London

# London example:

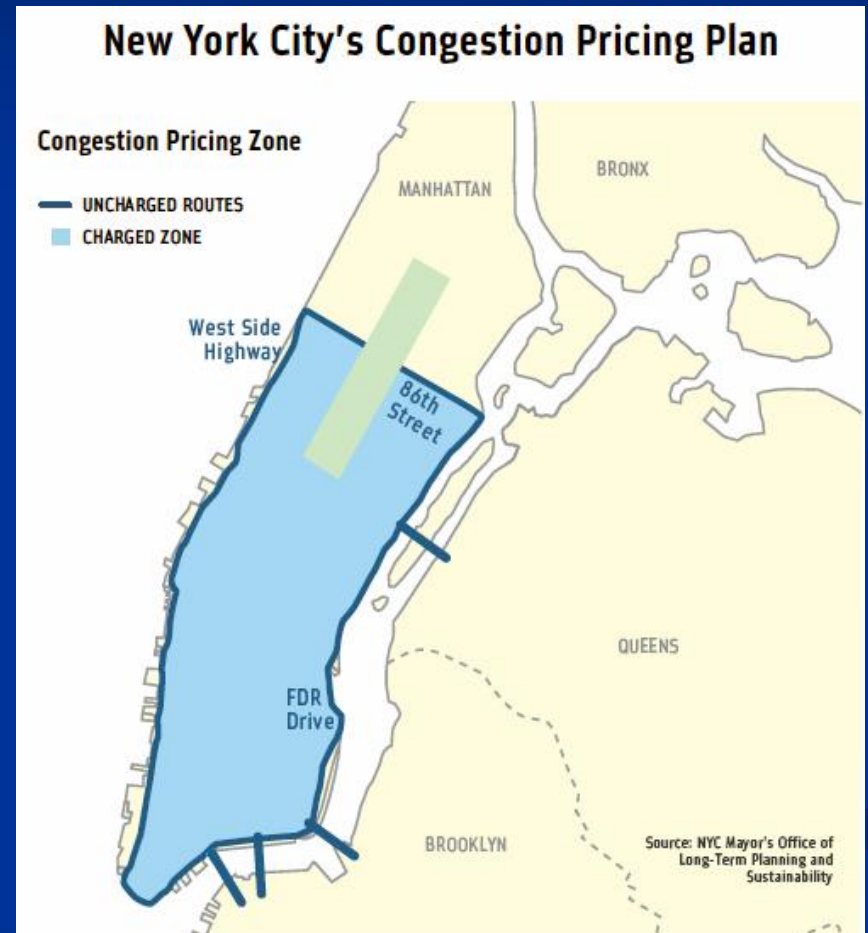
- Initiated in 2003
- Drivers charged £8 (US \$15) per day for drivers entering a congestion charge zone between 7am and 6:30pm
- System uses cameras and databases to match cars to owners
- Results:
  - Traffic congestion decreased by 20 percent
  - NO<sub>x</sub> and PM emissions decreased by 12 percent
  - GHG emissions reduced by >15 percent
- Zone expanded to double size in February 2007
- Will soon move to GHG emissions-based charging
  - £20 (US \$37) for SUVs/trucks
  - Most cars will continue to pay £8 charge
  - Discount for low-GHG emissions vehicles

# London congestion charge zone



# Manhattan proposal (PlaNYC)

- Cars entering or leaving Central Business District between 6am and 6pm would pay \$8 daily fee
- Trucks would pay \$21 daily fee
- Vehicles that drive only within the CBD would pay half price
- Emergency, handicapped plates, taxis, and for-hire vehicles exempt



# Status of Manhattan proposal

- Looked dead as of July 17
- Deal appears to have been reached July 19
- Still many details to be worked out



# Congestion pricing/zones

## ■ Pros:

- Reduction in congestion
- Reduction in air pollution
- Reduction in GHG emissions
- Increased transit use
- Increased bicycle/pedestrian activity

## ■ Cons:

- Privacy issues
  - NY proposal would require approximately 1000 cameras
  - License numbers matched with ownership database
- Typically implemented in high-density cities
  - May not be a match for Utah cities



# Incentives to retire old cars

- Idea is to create a rebate, tax credit, or other reward to retire older, higher-emission vehicles
- Was among the 200+ policy options originally considered by BRAC/SWG (but was focused on diesel vehicles)

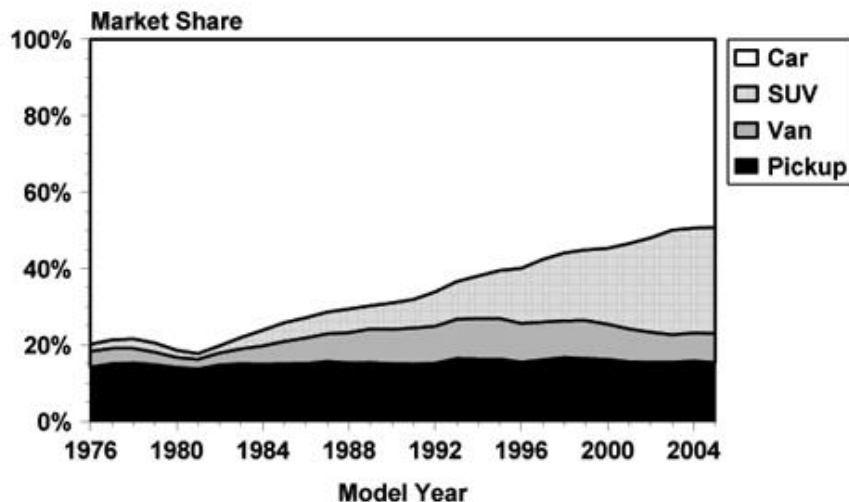
# Background

- Criteria pollution regulations:
  - Light-duty vehicles up to 8,500 lbs are regulated under Tier II standards
  - Medium-duty passenger vehicles (SUVs and Vans, but not trucks) 8,500-10,000 lbs are also regulated under Tier II standards
  - Heavy-duty diesel and gasoline vehicles are regulated under separate standards
- Fuel economy:
  - Currently only regulated for light-duty vehicles up to 8,500 lbs
  - Will change to include medium-duty passenger vehicles (SUVs and Vans, but not trucks) 8,500-10,000 lbs in 2011
  - Trucks will not be included

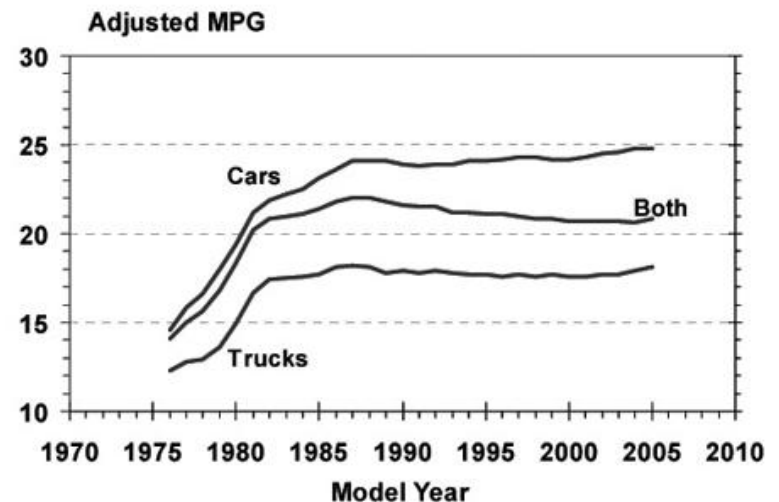
# Fuel economy and GHG emissions

- Vehicle GHG emissions closely tied to fuel economy
- Although fuel economy has improved, there has been a shift to trucks/minivans/SUVs
- As a result, overall fuel economy hasn't changed much over the past two decades

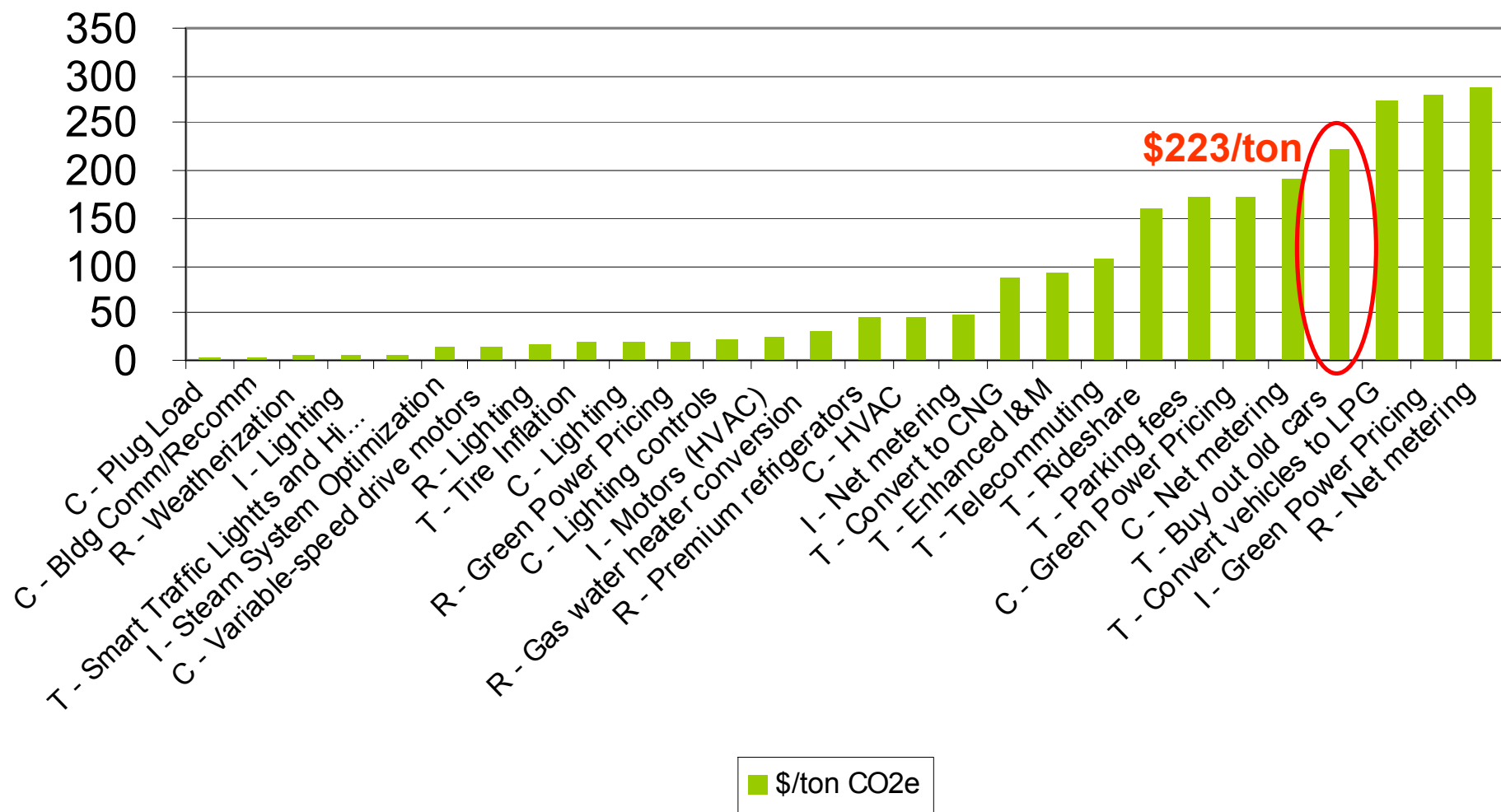
**Sales Fraction by Vehicle Type  
(Three Year Moving Average)**



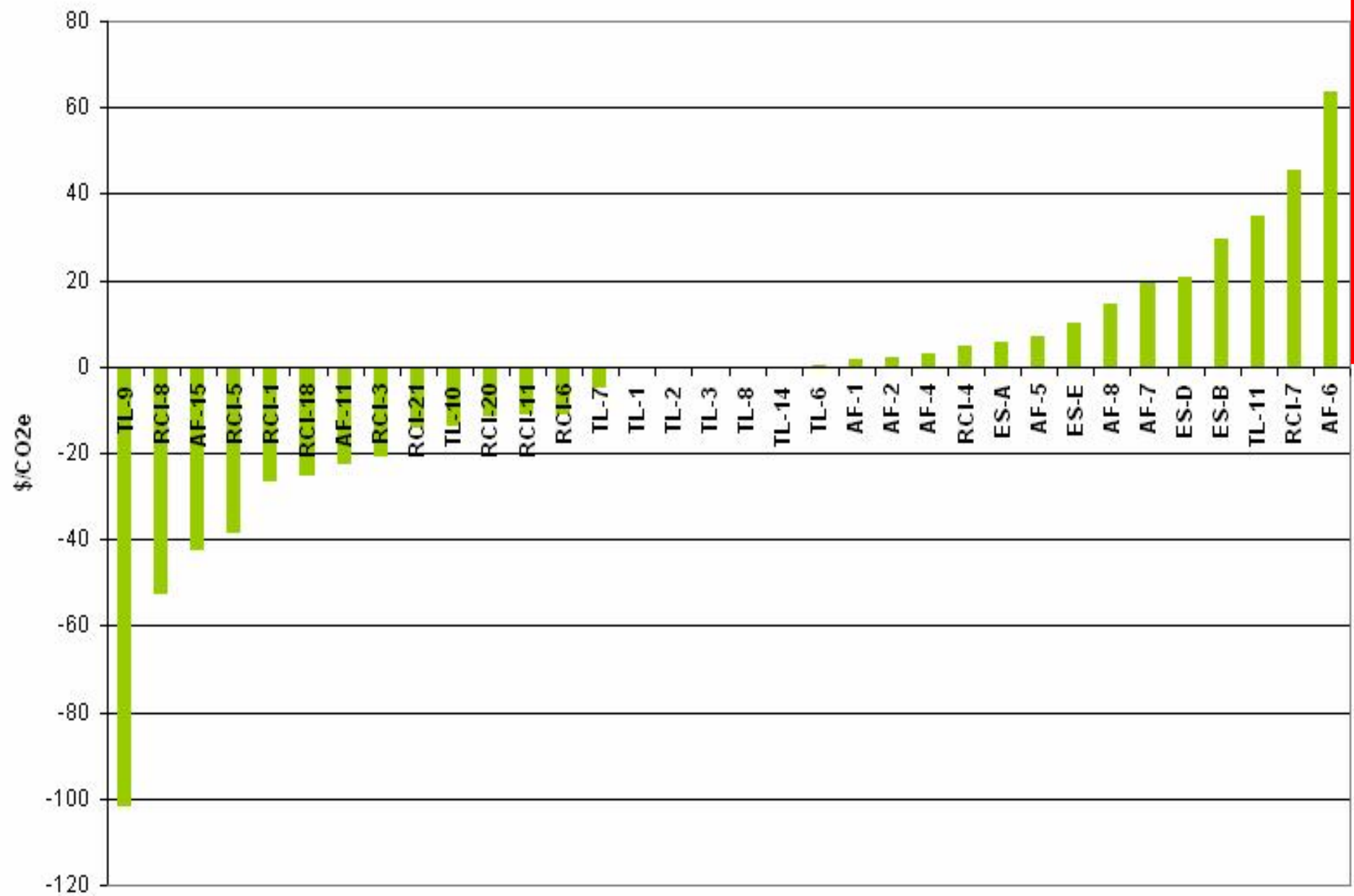
**Adjusted Fuel Economy by Model Year  
(Three Year Moving Average)**



# 2000 OERP Study: Cost



Cost (Average of States)



# Incentives to retire old cars: Summary

- Complicated policy option with many moving parts
- Could be an expensive option
- Has important air quality co-benefits